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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,170	04/01/2004	Akira Ando	119309	7373

25944 7590 09/27/2005

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EXAMINER
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KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/814,170

Applicant(s)

ANDO, AKIRA

Examiner

Ramesh Krishnamurthy

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 9 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/01/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

This office action is responsive to communications filed 04/01/2004.

**Claims 1 – 11 are pending.**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2003-068334 in view of WO00/36482 and further in view of WO 01/59537.

The document JP 2003-068334 discloses (Figs. 1 & 3, for example) a gas decompression device (7) which decompresses gas to be supplied to a fuel cell (1) in fuel cell system, the gas decompression device comprising: a body (21) which includes an inlet (27), an outlet (28), and an internal space; a diaphragm (22a,b) which divides the internal space into a measuring room (24) and a back pressure room (23); a valve seat (26) which is provided for the measuring room and arranged between the inlet and the outlet; a valve body (29, 30) which is provided for the valve seat and interlocked with the diaphragm; working pressure supply means (2) which supplies working pressure to the back pressure room; a pressure control spring (31) which urges the diaphragm in a direction to make the valve body separate from the valve seat; wherein the diaphragm (22a,b) is displaced in a direction to make the valve body (29,30) come close to the valve seat (26) when gas pressure works on the measuring room side of the diaphragm, the diaphragm is displaced in a direction to make the valve body separate from the valve seat when working pressure works on the back pressure room side of the

diaphragm, and gas flowing in the measuring room through the inlet and out from the outlet is decompressed by such that collaboration of at least the diaphragm and the pressure control spring makes the valve body move with reference to the valve seat.

The document JP 2003 – 068334 discloses the claimed invention with the exception of explicitly disclosing working pressure adjust means which adjusts pressure to be supplied to the back pressure room.

The document WO 00/36482 discloses that it is known in the art to provide means (26, 27) to adjust the pressure of fluid to be supplied to the backpressure room (21) for the purpose of suitably controlling the outlet flow characteristics to a desired value.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in JP 2003 – 068334 working pressure adjust means which adjusts pressure to be supplied to the back pressure room for the purpose of suitably controlling the outlet flow characteristics to a desired value, as recognized by WO 00/36482.

It is noted that WO 00/36482 discloses a pressure sensor (30) whose output is fed to a controller (31) for controlling the pressure switch valve (24, 26). The document WO 00/36482 does not explicitly disclose that the pressure sensor (30) is gas flow rate detect means. The document WO 01/59537 discloses (see pages 16 – 17) that it is known in the art to relate the output from pressure sensor (20) in the outlet to flow rate of the fluid through the outlet by essentially tabulating a relationship i.e. forming a pre-determined map data between the pressure and the flow rate. Thus the sensing means

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(30) could detect a value corresponding to the flow rate and is thus in effect a flow rate sensor, as well.

3. Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 – 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frederick Nicolas, can be reached on (571) 272 – 4931. The fax phone number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramesh Krishnamurthy, Ph.D., PE  
Primary Examiner  
Art Unit 3753